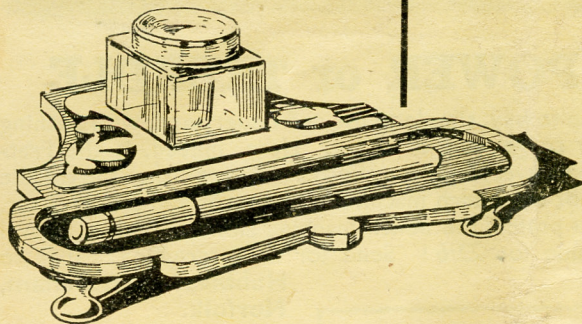


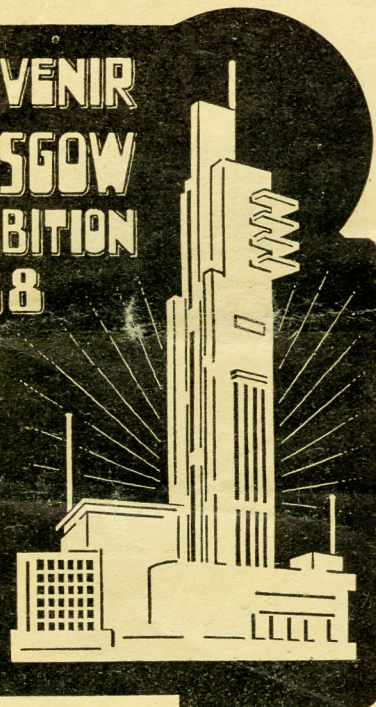
Hobbies

WEEKLY

Designs for
these Novelties
free inside



SOUVENIR
GLASGOW
EXHIBITION
1938



August 20th. 1938

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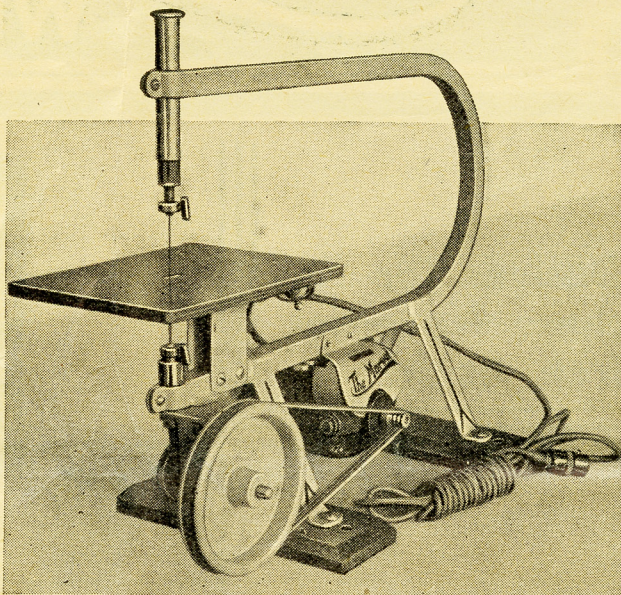
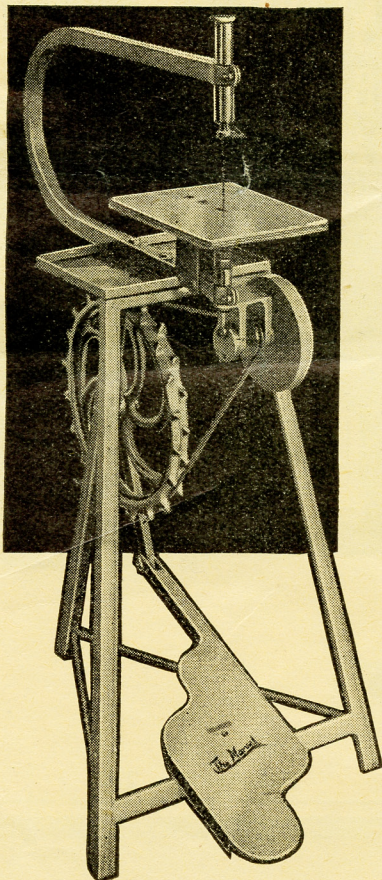
Vol. 86. No. 2235

THE FRETWORKER'S AND
HOME CRAFTSMAN'S JOURNAL

NEW..!

The "Marvel" Fretmachine

It's NEW . . . it's different ! And it sells at a NEW low price ! Hobbies "Marvel" is a strong, sturdy Fretmachine of sound engineering design. It has a welded steel frame—vertical stroke—adjustable saw tension—whilst the working parts are in hardened steel.



POWER or TREADLE

Cheap to buy, simple to use and understand, with nothing likely to get out of order. Here, indeed, is the Fretmachine everybody can afford. Choose either the treadle type or the bench machine with motor and switch. Or, if you prefer, the bench machine alone. Truly a marvel of value for 22/6 ! Send for an interesting leaflet to Hobbies Ltd., Dereham, Norfolk.

22/6

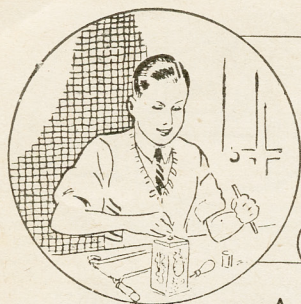
Bench Machine
without motor
Carr. Fwd.

Bench Machine with 1/30 h.p. motor, switch, etc. 84/- or with 1/20 h.p. motor 105/- Carriage Forward.

27/6

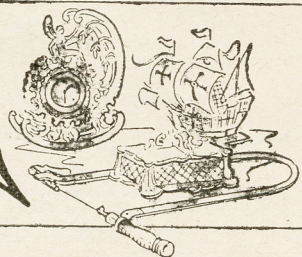
Treadle Machine as illustrated Carr. Fwd.

**A
Marvel
of Value**



Hobbies

WEEKLY



August 20th. 1938

Vol. 86. No. 2235

THE principal subject of this week is naturally the reproduction of the great Tower at the Empire Exhibition at Glasgow. All who have seen it will agree it is a splendid replica and I know many readers will want to make it up in one or all of the various methods suggested on page 483. There are many souvenirs of the Exhibition, but none can come up to one you have made yourself.

* * *

I WAS at the Exhibition a little time ago, and could not help thinking what a wonderful place of interest it was for readers of Hobbies. I wish you could all go—if only to see the marvellous models of almost every subject under the sun. Maybe some of them will be offered you in these pages later, so keep your eyes open! There was a delightful model of our old friend "The Cutty Sark" for instance, made in silver, whilst, as is only natural for a Clydeside Exhibition, there were dozens of other ship models—including the great Queen Elizabeth which one could actually see being built on the stocks on the river. The care and detail in construction of these models was really a lesson to us who are sometimes in too much of a hurry.

* * *

ANOTHER interesting visit I paid was in one of the Pavilions of Scotland where the activities of Girls' and Boys' Clubs was provided. When I was there some handymen of the Edinburgh Academy Boys' Club were showing what they could do with fretwork tools. The lads were busy, under helpful guidance, making one of our designs, and were enjoying it thoroughly. I found, as was to be expected, our model of the Forth Bridge held a prominent position on the Stand. The address of the Headquarters of this Club, by the way, is 38 Raeburn Place, Edinburgh, and I know any reader will be made welcome.

* * *

ANOTHER great point of interest in the Exhibition

was the range of beautiful timber shown in the various sections. In the Colonial Pavilions, there were some really wonderful boards, with grain and figure different from most timber we know. It was difficult to decide which was the nicest, especially when one saw it in practical use in cabinets, tables, panels, flooring and so on. You really do not realize how beautiful a plain board of timber can be until you have seen it as prepared and finished by expert craftsmen. Each country, you know, has its own type of tree and is proud of its timber. Whether Gold Coast, Burma, or Australia, there were magnificent specimens of wood peculiar to their own particular country.

* * *

NO doubt many of you will still be enjoying camp life, so will find our hints on the subject most helpful. Don't leave everything until you are almost ready to go, because there are many helpful articles and gadgets which you should prepare early. It is often a failing—even with people going on an ordinary holiday—to wait until the night before and then have to pack everything in a great hurry. And when they arrive the toothbrush or spare suit, or shaving brush is missing.

* * *

A LETTER reached me only the other day which amplifies this point. A reader sent word on the Thursday that he was going to camp on the Sunday, and would I let him have back numbers of Hobbies Weekly showing gadgets he could make. Now I ask you—what time would he have to do much at all? I sent some details

required, but as he could not get the copies until the Friday he had just one day to clear them. How much easier to think a little bit forward, to make what you want comfortably, to be able to get away without flurry or haste. It is not always the people who rush about who do the most work, remember. Those who leave everything to the last minute in preparation have a most uncomfortable time.

The Editor

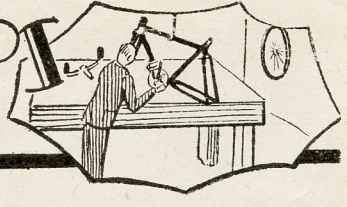
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Correspondence should be addressed to: The Editor, Hobbies Weekly, Dereham, Norfolk, and a stamp enclosed with the Reply Coupon from Cover iii if a reply is required. Particulars of Subscription rates, Publishing, Advertising, etc., are on cover iii.



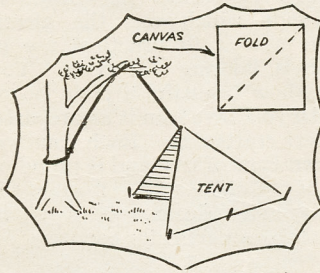
HINTS & TIPS WORTH KNOWING



For original Tips published the sender will receive a Hobbies Propelling Pencil. We cannot acknowledge all those received or guarantee to print them. Send to The Editor, Hobbies Weekly, Dereham, Norfolk. Keep them short and add rough pencil sketches if possible.

Simple Tent

THIS is a simple tent anyone could make in a few minutes. All you need is a rope, a square of canvas, and roughly 6 tent pegs.



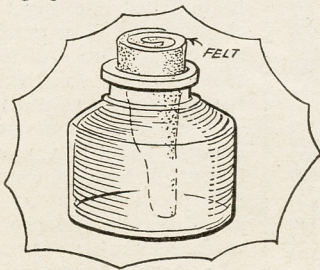
When the canvas is folded in halves, and hung up as shown, throw the rope over a branch of the tree, and then round the trunk to make it firm.—(S. E. Quitok, Cricklewood).

Simple Nail Punch

AVERY good nail punch can be made from the handle of an old safety razor.—(T. Pastourel, Rockhampton, Queensland).

Stamp Moistener

THIS is a useful tip to people who do not like licking gummed envelopes or stamps. Get a shallow bottle with rather a wide mouth such as ink is often sold in. Then a strip of felt or thick cloth about a quarter of an inch wide is rolled up in such a way that it forms a cork for the bottle. Leave one end of the felt hanging inside the bottle as



shown. Keep the bottle almost filled with water and you will find that the top of the rolled felt is always moist.—(No Name, Dewsbury).

Water Purifier

ONE little-known use for iodine is the purification of dubious water in camp. Boiling is not necessary. Three drops of iodine to each quart of water are sufficient to kill bacteria.—(O. W. Jones, Holyhead).

Cleaning Stamps

THE cleaning of stamps is done by brushing them lightly with peroxide of hydrogen, which can be bought at the chemists. This also restores colour to faded stamps, a camel hair brush dipped in the liquid should be used for this purpose.—(R. Sutclall, Portslade).

SOLUTION TO LAST WEEK'S X WORD PUZZLE

T	I	P	B	A	T	H	E	D
I	O	R	I	S	E	S	I	
D	A	N	G	E	R	A	P	V
E	N	D	A	A	D	O	R	E
D	S	T	A	I	R	I		
A	B	A	H	T	I	N	E	
R	E	E	V	E	F	R	O	G
C	R	E	P	L	A	N	C	
T	R	U	D	G	E	O	N	S
I	O	N	A	W	A	S	H	P
C	R	A	M	P	T	E	R	S

Brighten Chrome Handlebars

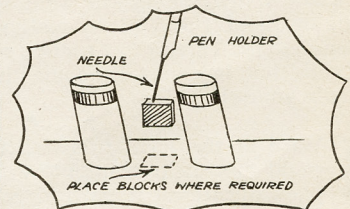
PUT a piece of silver paper in boiling water and rub lightly over the chrome article. When you have done this let it dry on for a couple of minutes, then take a clean duster and rub briskly. This will bring the brightness back.—(G. Levitt, Leeds).

Drill Bit Covers

IT is a good tip to screw a cork on to the end of your bits for your brace after use, as this will protect the points from damage.—(F. A. Hayes, Liverpool).

Small Piece Holder

IFIND this tool very useful for gluing small pieces of wood on my model ships. Take a pen-holder and insert a needle in place of the nib, now stick needle into



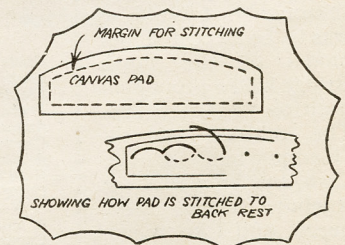
wood, glue the part, and place wood where required. When the needle is extracted there will be no mark left on wood.—(G. Pairman, Glasgow).

For Blunt Scissors

WHEN you have a pair of blunt scissors, take a bottle and attempt to cut off the neck. It will be found that the scissors are quite sharp again.—(J. Latham, Bishop's Stortford).

Canoe Comfort

YOUR instructions for building the canoe, say, with reference to the back rest, "this can be padded if desired." A most comfortable padding can be used in the following way. Obtain a few red rubber sponges, cut into small pieces, and sew into a shallow canvas bag of the required



dimensions, leaving a wide margin (about 1/2 in.) outside, around the stitches. This outer edge can now be covered with glue, and finally "sewn" on to the back rest with fine string.—(V. D. Parker, Hebden Bridge).

Everyone should make this striking EMPIRE EXHIBITION SOUVENIR



souvenir pattern on the centre pages of this issue. It is intended as a memorial to visits paid this year, and can be kept for future interest, because this great Exhibition stands out in history. Just as the Paris Exhibition last year, the Chicago Exhibition next year, and the great Wembley Exhibition of 1924 are well remembered.

A Variety of Models

The patterns provide a wide range of possibilities in the making, and if you do not want the model so large as is shown, you can even make it in miniature to any size you wish. As illustrated here, the souvenir is intended to be cut in wood and glued on a background and then used as a wall plaque or as a stand for a table.

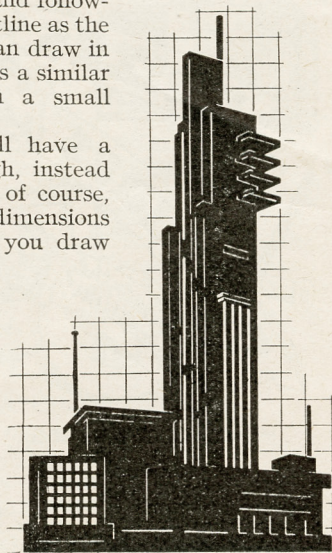
If, on the other hand, you prefer to make it as a miniature, or in any size other than that shown, well then you can reproduce the patterns to your own needs.

Larger or Smaller

This is easily done by drawing across the actual outline of the Tower markings at $\frac{1}{2}$ in. intervals to form squares as shown in the detail herewith. If you now want the actual model, say, only half size, then draw out on a sheet of paper, squares measuring $\frac{1}{4}$ in. across with the same number in both directions. Then, by taking a pencil and following the same outline as the large one, you can draw in the small squares a similar reproduction on a small scale.

Thus you will have a Tower $5\frac{1}{2}$ ins. high, instead of $10\frac{1}{2}$ ins. Or, of course, by varying the dimensions of the squares you draw upon, you can make the scale anything you wish.

If you have a small model like this, you can cut it in a reasonably thick wood, say, $\frac{3}{8}$ in. or $\frac{1}{2}$ in., and make a very realistic standing model glued to a base.



How to mark out the pattern to alter its size

THERE must be a very large percentage of our readers who have paid at least one visit to the great Empire Exhibition now being held at Bellahouston Park. It is proving an enormous attraction and visitors are going from all over the British Isles to see the amazing range of exhibits there.

Representative pavilions of Scotland, the British Government, the Dominions, and Crown Colonies, etc., are all there on the fascinating stands full of interesting pictures, dioramic and working models. The Palace of Engineering shows you everything, from making an eye in a needle, to the building of a battleship, and in the Palace of Industry you have a range of work from coal mining to weaving.

Palaces of Interest

There, are of course, literally dozens of other "palaces," and "pavilions," each of which deserves a thorough examination. The whole Exhibition is laid out on a vast scale, but dominating it all, on a central rise, is a magnificent and modern steel Tower. It rises sheer, so that when you are at the top, being conveyed there by elevators, you are over 400 feet above sea level, and have a range of 20 miles vision on a clear day.

The Great Tower

This Tower has become symbolical of the Exhibition itself, and souvenirs sold in connection with the event, bear replicas of this Tower in some form or other.

We want our readers, however, to make their own, and have for that purpose, provided a special

This piece can be a plain rectangle of wood, measuring 4ins. by 3ins., and serve, if the front part is hollowed, as a pin tray, or stud holder. Or, again, you may like to fix the small model cut-out to a background and glue thereon a calendar for 1938 as a reminder of an eventful year.

So far as the actual size of the patterns shown, the parts provided can be pasted to all kinds of materials and used in a variety of methods.

MATERIALS SUPPLIED

Fretwood.—For making this design, we supply a parcel of padouk and whitewood in correct thickness and size for 1/8 (post free 2/1).

A pair of suitable Brass Hangers are 1d. per pair, and Ivorine and Xylonite are 1/6 and 1/3 respectively, per sheet, measuring 12ins. by 6ins. Postage is extra if ordered apart from the wood.

Whichever way you use it, however, it is advisable to keep the features of the Tower as plain as possible and to get the outline and wording in a colour quite in contrast to the actual background. The wording need not, of course, be the same colour as the Tower, but if both of them are dark, then the background should be light, or, of course, vice versa.

Commencing Work

Before commencing work in any case, it will be necessary to cut the patterns apart from their support pieces of material. The outline of the background piece is a plain line running round the back, and a good plan is to trace this off and transfer it to the wood direct.

The wording and the Tower are then cut away in the paper and pasted down to support pieces of material. The backboard itself can very well be in $\frac{3}{8}$ in. or $\frac{1}{4}$ in. material with the wording slightly thinner—in $\frac{3}{16}$ in. or $\frac{1}{8}$ in. material.

Of course, you can have these overlay pieces—the wording and the Tower—in other material besides wood. You may like them in thin Ivorine or Xylonite. Or, if you can obtain it, in sheet bakelite or celluloid.

The Model in Metal

There is also the possibility of the work being done in metal, and if you can obtain a sheet of bronzed steel, or similar material, it will be almost an exact replica of the actual Tower.

When the overlays have been cut, if they are in wood, they can be glued in place on the plain background piece. If they are in metal, you should be able to glue them on with Durofix.

If you want the Plaque to stand, then a strut of wood is hinged to the back about two thirds the way up, with the bottom edge of the Plaque cut square instead of with a step as at present. If you want the Plaque to hang up, add two brass wall hangers, one each side near the top. Do not make a hole through the Plaque itself or it will look unsightly.

Points to Note

Be careful in adding the wording to get it in line. A good plan is to draw a light pencil mark where it will come, so you can glue the various letters on this line. The lettering itself must, of course, be cut out very carefully. It is best to cut it out in plywood to reduce the likelihood of damage.

The long lines of the Tower must be cut with a fine fretsaw, or if you are using thick wood, they can be just marked in with a chisel or knife or V tool. Notice that some are thicker than others, and keep to these dimensions very definitely.



Closing Date:
August 31st

The August Hobbies PHOTOGRAPHIC COMPETITION

A Holiday Scene

Everyone who has a camera, stands a chance to win a cash prize in our Monthly Competitions. Two sections—Open and Junior. The available subjects under the above heading are widespread and give everyone a chance to enter at least one print. There is no entrance fee, but good prizes are offered.

RULES AND PRIZES

In the Open Section a 1st Prize of a Guinea Swan Fountain Pen and a 2nd Prize of 10/- . In the Junior Section (those under 16) the 1st Prize is a Fountain Pen value 10/- and the 2nd Prize 7/6. Each print must bear the competitor's full name and address, and his age, if under 16 years. Entries should be addressed Amateur Photographic Competition,

Hobbies Weekly, Dereham, Norfolk, and must arrive not later than August 31st. The Editor reserves the right to publish any entries he wishes in Hobbies Weekly. No competitor to take more than one prize during the season. If a stamped addressed envelope is sent with the entries every endeavour will be made to return them, except the prize-winning ones.

A popular "line" you can make—a SILHOUETTE NIGHTLIGHT

ARTISTIC, ornamental electric table-lamps and night lights are extremely popular just now. You can be in the fashion, too, at very low cost, by making the novel silhouette night-light illustrated.

It is a small affair, standing about 8½ ins. high by 7 ins. long by 4½ ins. wide. Children will adore it and the "dancing shadow" which, when the light is switched on—by means of an ordinary flashlamp case—shows up prominently against the opal or frosted glass background.

Apart from this attraction and the artifice of the whole, the frontal light is a soft glow, whereas that at the back radiates like a setting sun, showing up the bedroom wall fantastically. The flashlamp case idea and a special bulb-adaptor fitting saves much electrical bother, and moreover, one hasn't to get up out of bed to switch on the light.

Making the Stand

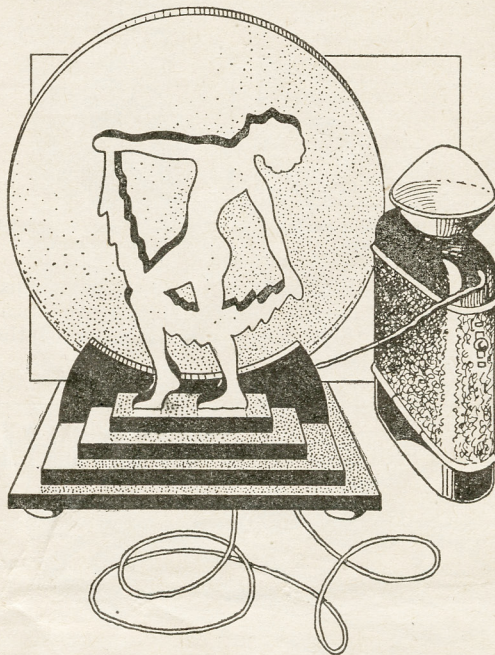
As the stand is enamel-finished, it can be made from plywood—3/16 in. or ¼ in. stuff, the latter suiting the dimensions given in the various diagrams at Figs. 2, 3 and 4.

At Fig. 3, the base and one of the sides of the glass holder are shown combined. The base is a plain rectangle measuring 5 ins. by 3½ ins. The mortises cut in same suit the tenons of the holder sides.

A central, packing piece is required to go between the sides, and the inner circumference of this is ¾ in. less than the sides so as to provide a channel for the glass disc.

Glue to the base

Having cut out these parts, glue the holder sides in the base and attach the packing piece. Glue the lot to an under base measuring 6 ins. by 4½ ins. to be flush at the back. Against the front of the holder glue another base 4 ins. long



by 1½ ins. wide, then add the base belonging to the statuette, this being detailed at Fig. 4.

The Lamp Block

A lamp block is required, this being cut to the shape and size at Fig. 2 from ¾ in. deal. Before drilling the bulb socket hole and lead-in hole, obtain the fitting shown at Fig. 4.

This is a 4-volt Pea Lamp, complete with flexible cord and an adaptor. It costs 8d. locally, or if you have any difficulty, from L. Wilkinson, 204, Lower Addiscombe Road, Croydon.

Drill the socket hole to the depth required, then drill a smaller hole in the centre and through the side (see dotted lines at Fig. 2).

Adhere the prepared block centrally to the back of the glass holder. These parts—when the wooden toes (No. 19) are glued to the corners of the base—should be enamelled jade green or any other stylish colour.

MATERIALS REQUIRED

- 1 piece plywood (figure) 7 ins. by 4½ ins. by ¼ in.
- 2 pieces (holder sides) 4 ins. by 1½ ins. by ¼ in.
- 1 piece (packing) 4 ins. by 1½ ins. by ¼ in.
- 1 piece (base No. 1) 6 ins. by 4½ ins. by ¼ in.
- 1 piece (base No. 2) 5 ins. by 3½ ins. by ¼ in.
- 1 piece (base No. 3) 4 ins. by 1½ ins. by ¼ in.
- 1 piece (base No. 4) 3 ins. by 1 in. by ¼ in.
- 1 piece deal (blocking) 4 ins. by 1½ ins. by ¼ in.
- 4 wooden toes (No. 19) ¼ in. across.
- 1 electric fitting (obtained locally).
- 1 piece opal or frosted glass, 7 ins. diam. (o.l.).

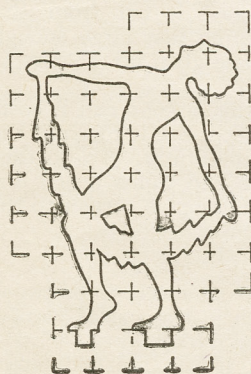


Fig. 1—Outline of figure in ¼" squares

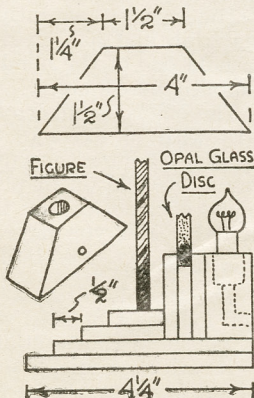


Fig. 2—Side view with lamp block

The statuette figure, outlined in $\frac{3}{4}$ in. squares at Fig. 1, is cut out from $\frac{1}{4}$ in. stuff. Remove any "burr" on the edges and enamel it a brown or grey shade. When dry, trim the tenons of the feet and glue to the base.

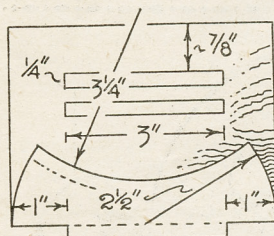


Fig. 3—The glass holder and base

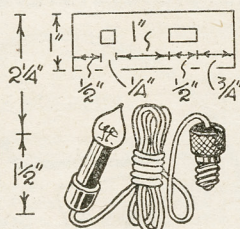


Fig. 4—Figure base with electric equipment

You will need a disc of opal or frosted glass 7 in. in diameter, by about $\frac{1}{8}$ in. or $\frac{1}{4}$ in. thick. Any local glazier will do this for you and round-polish the edges for a modest sum.

You can round-polish the edges yourself with

water and an oilstone slip. The sharpness of the edges need only be removed, however, as the rounding in this manner is rather slow and tedious.

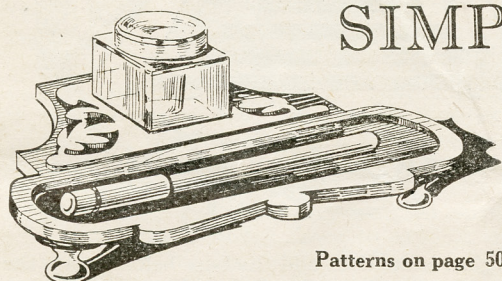
Electrical Connections

If the glass procured is $\frac{1}{8}$ in. thick, it must be packed in the holder with a suitable shaped piece of $\frac{1}{8}$ in. wood. If of $\frac{1}{4}$ -plate, it will only need to be pressed into the holder channel.

It should, in fact, be attached temporarily in view of dusting and cleaning. Therefore, it is advisable to glue the packing piece in place so as to save further trouble in that direction.

To affix the electrical bulb fitting in the block, disconnect the adapter and thread the flex through the lead-in holes. And before connecting up again, consider the flashlamp case.

The question is whether you will bore a tiny flex hole in the case top or remove the top from the case altogether. A tiny hole would not jeopardize the appearance of the case and it seems the best. All that remains is to insert the flex through the hole and connect the wires to the adapter which is screwed in in place of the bulb.



Patterns on page 501

SIMPLE FRETWORK PEN STAND

THOSE who are looking for a little odd job to do with the fretsaw, and want to make something useful, should turn to page 501 where complete patterns are given for a useful everyday fancy inkstand. It can be completed quite easily from a few odd pieces of wood, and the patterns shown are pasted down to the thicknesses indicated.

Notice that the solid black pattern is really an overlay and must be cut from the rest of the pattern in paper so it can be pasted to a separate board altogether.

The Base

Or, of course, you can trace it off in outline—which would probably be better—then put it down to a piece of $\frac{3}{16}$ in. wood. The main base is in $\frac{3}{16}$ in. material and if the overlay paper is left in it, that part must not be cut out in the base itself.

This is a solid piece apart from the long opening which forms the tray of the pen rack itself. The base of the tray is shown as the backing and is glued on the underside where shown by the dotted lines. Then in turn beneath this come one each of the two feet.

The backing piece is $\frac{1}{8}$ in. thick and the feet are $\frac{3}{16}$ in. A further back foot will be necessary, and this is glued under where the inkstand itself will be. The position is indicated, and for this

one has to cut out a circle in $\frac{3}{16}$ in. wood and another one in $\frac{1}{8}$ in.

When both have been cut, glue them together, then see that the edges of both are alike. Do not use glasspaper on the edges, but keep to a file and this will keep the surface quite flat.

Of course, the under edge can, if necessary, be rounded slightly with glasspaper in each of the three feet. They should be glued on quite firmly using only a thin layer of glue, and pressing them tightly in place.

The Overlay

By the way, the edge of the hole in the base which forms the tray for the pens, can also be slightly rounded with glasspaper to take off the sharp edge.

The overlay as mentioned is cut from $\frac{1}{8}$ in. material, and has an opening just large enough to hold one of the handsome glass ink holders as supplied by Hobbies.

The official number of this is 5661 and it costs 9d.—with 3d. extra by post. See it fits into the opening—before you cut it—firmly. To do this, stand the inkwell in place and run a pencil line round it or notice that the design is correct to the actual holder you have.

How to Finish

The completed stand if cut nicely in fretwood will look best finished with just a coat of varnish or polish, or can be stained darker.

It will look nicer, too, if you use a different brand of wood for the actual overlay, but in any case the piece can be darkened down by staining it a different shade from the rest.

If you play darts, make this AUTOMATIC DART SCORER

DART players will welcome the scorer as it entirely does away with chalk or pencils and paper. It is certain in action and quite simple, and does not demand any arithmetic on the player's side to show the score, as this is always to be seen in the window. The total shown is that still remaining to be got, not that scored, which is an additional advantage.

Fig. 1 shows how to mark out the front pane of $\frac{1}{8}$ in. plywood. Only the upper half is given to save space, so the actual length of the panel is 1ft. 4ins.

First draw a line down the centre and then line A—B across the panel. On this mark centres C and D, and strike the arcs E and F shown. The exact length of these will be decided later.

Where line A—B crosses the centre line, cut out the window, $\frac{1}{2}$ in. wide and $1\frac{1}{2}$ ins. long. Bevel off the top and bottom edges of this

On centres C—D drill fine holes through the panel as guides to the centres at the rear. The lower half of the panel is treated exactly the same.

Cutting the Discs

Cut four 1in. discs of $\frac{3}{8}$ in. thick wood, round the edges and glue on the panel where shown by the dotted circles. From the pattern, Fig. 2, cut two from $\frac{1}{4}$ in. plywood and glue to panel where shown, also by dotted lines.

Fig. 3 shows how to mark out the scoring discs, four of which are required. Strike the 6in. circles on to stout white paper and divide into 40 equal divisions. This can be done easily enough with a protractor, marking off the spaces 9 degrees each. Now strike the inner circle.

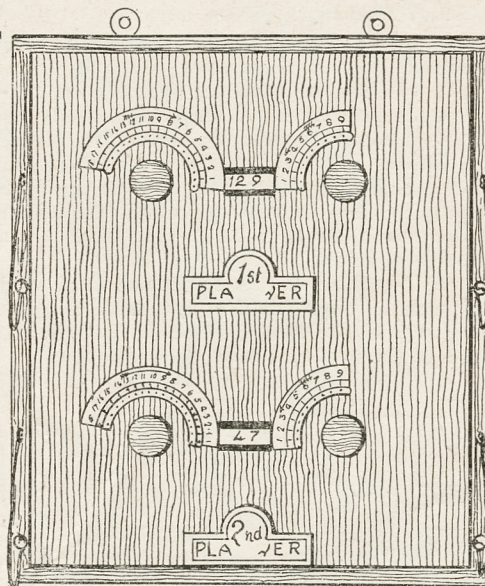
Glue these discs on to $\frac{1}{4}$ in. plywood and cut out accurately. On the small circle, where the radial division lines cross, drill small holes just large enough to admit a 1in. wire nail to go through.

Number the Discs

On the edge of the discs, cut or file small nicks for the tooth of the detents to enter (see later on). Two of the discs are now numbered 30 down to 1, in an anti-clockwise direction, as in Fig. 3.

The other two discs are numbered 9 to 0, repeated four times in a clockwise direction.

Now place these discs on the interior face of the panel and drive a fretwork nail through the centre



of each into the holes already drilled through centres C and D, to hold them temporarily. The ten-hundreds disc to the left and the units discs to the right, looking at the panel from the outer face side.

See the discs while close together do not actually touch one another; if they do, resort to a little edge filing to check it, otherwise when one is moved, it will rotate the other. Now move the discs until the numbers appear central in the windows.

The Catches

In this position, the detents are fixed. These are seen in Fig. 4. No separate patterns are supplied, they are cut from $\frac{1}{8}$ in. plywood to the simple shape shown, $\frac{1}{2}$ in. wide and $2\frac{1}{2}$ ins. long.

Trim the tooth ends to fit the nicks in the discs, and fix each with a small round-headed brass screw to be free to move up or down.

At the ends opposite the tooth ends, drive in a tiny screw. A third screw is driven in through the panel a little lower down, and an elastic band passed over all three to exercise a little pressure on the detents.

Fix these satisfactorily to hold the discs in the right position at each number, and allow free movement, with a slight clicking sound, as the discs rotate.

To get the correct length for the arc-shaped slots E and F, first insert a drill through the first hole in the discs directly under the number appearing in the windows, and bore through the panel.

On the ten-hundreds discs, insert the drill again

MATERIAL

1 in. plywood	..	1ft. 2ins. by 2ft. long.
1 in. plywood	..	1ft. 2ins. by 2ft. 6ins. long.
1 in. by 1 in. oak	..	(2) 1ft. 6ins. long.
1 in. by 1 in. oak	..	(2) 1ft. 2ins. long.
1 in. by 1 in. stripwood	..	(2) 1ft. 4ins. long.
1 in. by 1 in. stripwood	..	(2) 1ft. 2ins. long.
1 in. thick oak	..	5ins. square.
1 16in. thick oak	..	4ins. by 8ins.
1 in. dowel rod	..	9ins.

in the 18th hole past that already drilled and drill again.

On the units disc, drill again through the 9th hole past that already drilled. These holes will appear, of course, on the face side of the panel.

The Slotted Openings

Now remove the discs and cut out the arc-shaped slots between these holes. With the discs in place it will now be possible, by inserting a pin through the slots, to move the ten-hundreds discs 18 holes or divisions, and the units discs 9 holes.

Get this to work satisfactorily before proceeding further. The units discs can now be fixed permanently in place by boring through the centre a hole large enough to take a $\frac{3}{8}$ in. stout round-headed brass screw.

Put a thin brass washer under the head of the screw, pass through the disc and drive the screw through the centre D of the panel. Let the discs move free enough but not loosely.

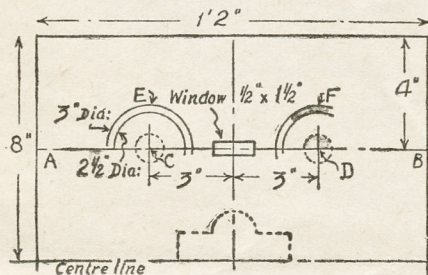


Fig. 1—Plan of half panel

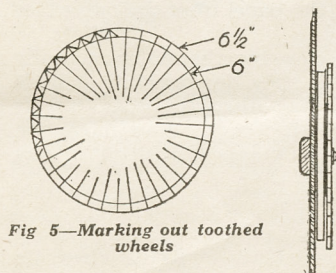


Fig. 5—Marking out toothed wheels



Fig. 9—Scoring pins

Fig. 6—Side view of disc and wheel mounted to panel

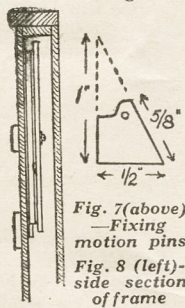


Fig. 7 (above)
— Fixing
motion pins
Fig. 8 (left)
— side section
of frame

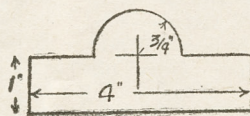


Fig. 2—Glued-on panels

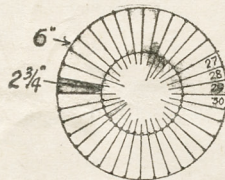


Fig. 3—Marking out discs

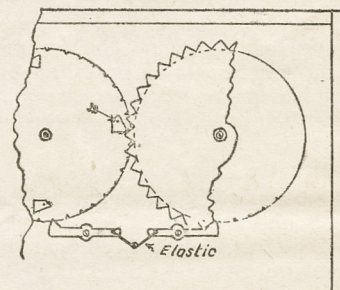


Fig. 4—Back view of "works"

and interpose one of these thin discs between the ten-hundreds discs and the toothed wheels, and fasten all together with screws, being sure to get the centres of all three in line.

Also see each tooth of the wheels comes exactly over one division of the discs beneath. Now fix the completed set of discs with round-headed brass screws to the panel in exactly the same way as the units discs.

Fig. 6 shows a side view of these discs in position. The toothed wheels are driven round by small catches. Eight will be required, four to each disc, and they are cut out of $\frac{1}{4}$ in. plywood to the shape shown in Fig. 7. The hole should admit freely a $\frac{1}{2}$ in. round-headed brass screw.

Turn the unit disc until the figure 0 appears in the window. Now reverse and on the disc in the position shown in Fig. 4, fix a catch by means of the screw. The catch should swing freely and its tip touch the tooth approximately where shown.

Where the arrow points drive into the disc a

small screw or nail to act as a stop to keep the tip of the catch well forward. Not too forward or else it will catch against the tooth above when rotated and move the toothed wheel two divisions instead of one.

Fix the other catches similarly, each over their respective figures 0 on the disc. If these are fitted correctly, and the job only requires a little care, at every complete revolution of the units disc, the toothed wheel and its attached disc will move forward 4 divisions.

All being well the outer frame can be made to hold the panel and "works."

The Framework

This consists of four pieces of $\frac{1}{2}$ in. by $1\frac{1}{2}$ ins. wood, oak would do nicely, nailed together to form a frame large enough to receive the panel. On the inside nail or glue round strips of $\frac{3}{8}$ in. by 1 in. wood to form a rebate top and bottom.

On this the panel can be fixed by screwing, and a back of $\frac{1}{4}$ in. plywood can be screwed in behind. The part section, Fig. 8, explains this.

If the panel is to be stained, now is the time to do it before the paper dials are glued on. Also stain the edges of the arc-shaped slots and bevels of the windows dead black.

The dials are arc shaped pieces of stout white paper or bristol board, glued against the arcs E

At Fig. 5 is shown the pattern for getting out the toothed wheels which are automatically worked from the units discs to make the numbering correct. It is, of course, essential for every ten scored on the units side to move the ten-hundreds discs one division, and it is accomplished very simply. First cut out the wheels.

The Wheels

There is no need to draw the pattern on to paper; it can be marked out directly on to the wood, $\frac{1}{2}$ in. plywood. Strike a $6\frac{1}{2}$ in. circle first and then a 6 in. one.

With the protractor, again mark off into 40 divisions and shape the teeth in pencil, as shown in Fig. 5. Cut out accurately with the fretsaw.

Cut two discs 4 ins. dia. from $\frac{1}{16}$ in. fretwood,

and F. On these the holes in the discs behind are numbered 1 to 18 or 1 to 9, as seen in the general view.

Shaped-up pieces of paper are also glued to the panels below the discs and lettered 1st and 2nd player.

Numbering

All the necessary lettering and numbering looks much better if neatly done in black Indian ink. You can buy a small bottle of this for 7½d.

Now give the whole panel and paper dials a coat of warm size, and when dry, a coat of transparent varnish.

The scoring pins, four of which are required, are shown in Fig. 9. Quite simple these, being 2in. lengths of ¾in. dowelling, each having a 1in. wire nail driven in one end.

Cut off the heads of the nails, leaving ½in. extending, and file a groove round the dowels. In these grooves tie a length of fine whipcord or

coloured macramé cord and fasten the cords to screw eyes fixed to the edges of the framing.

Allow enough cord for free manipulation of the scoring pins. Rest holes for these pins can be drilled in the framing a little below the screw eyes. This completes the scorer, which can be hung on the wall by brass plates screwed to the back.

How it Works

To work the scorer, set the dials to show 301 in the windows first.

Then, as each score is made, move the discs the correct amount by inserting the pins in the scoring holes and drawing in the direction shown by the arrows on the dials.

If the score is 8, for instance, push the pin in the 8th hole in the units disc and move round until stopped by the end of the slot.

If 48, move 4 in the ten-hundreds disc and 8 in the units disc, and so on. The total still to be scored is shown each time in the windows.

Seats and cupboard are handy in GARDEN BARREL FURNITURE

INEXPENSIVE and practical furniture for garden, sun parlour, or verandah, can well be made from ordinary barrels and tubs.

Look at the illustration of the good sturdy table which would be difficult to upset.

This is made simply from a barrel, scrubbed clean and painted a beautiful shade of royal blue, banded with black—royal blue looks specially good out of doors.

Another smart idea is to paint the planks in alternate colours, cherry and grey, black and white for instance. But if you want the furniture

to go really gay, try Harlequin colours all round, each plank different, and the bands painted with aluminium.

As a more elaborate idea the illustration shows

a cupboard cleverly contrived beneath the table top, made by cutting out a piece of the side for a door, and fixing it by hinges. The inside of the door is covered with a piece of thin plywood, nailed to the cut out piece, which, being pliable easily takes the shape.

Fix up a shelf or two inside, and add a knob for the handle. A cupboard is useful for storing all sorts of things like a garden tea service, books, or other oddments.

Making a Chair

The comfortable looking chair is made by sawing away part of a barrel, taking care to keep both sides alike, and the edges smooth.

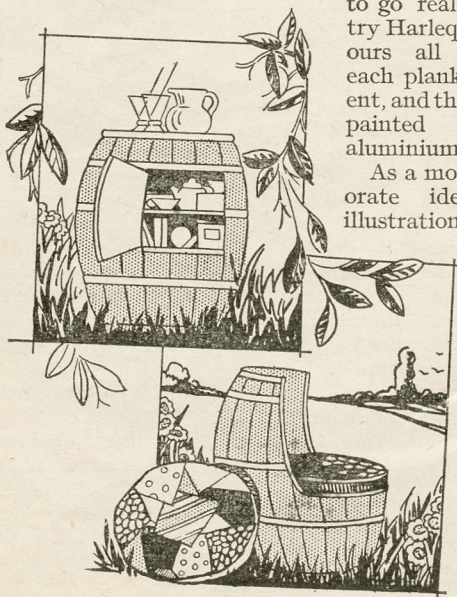
Make a round wooden seat for inside, to rest firmly on small solid wooden blocks fixed to the inside of the barrel, or a band of wood all round. In either case make sure the seat is held firmly in position. Fix a small ring to it, so it may easily be lifted up, to disclose a place for storing cushions below.

Bright Colours

The wooden seat is, of course, covered over with a round cushion. Patchwork cushions, by the way, made of odds and ends of cretonne in bright colours, go extremely well with this type of garden furniture.

Small tubs, either painted or unpainted, can be used for plants. In this case they should have holes for drainage bored in the base.

Large tubs can be sawn in two to make a couple of low tables, and yet another idea where garden space is limited, is to build a small rock garden in a shallow tub.



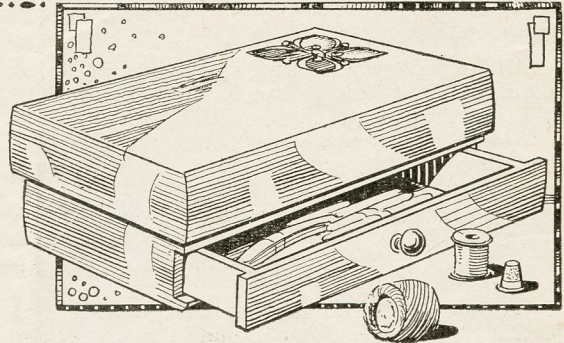
Any lady will be delighted if you make A STOCKING BOX

HERE is an article which would make a very useful and acceptable present for a lady. It is a box to contain about six pairs of stockings, below which is a spacious drawer for silks, cotton, scissors, etc.

The illustration (Fig. 1) shows the complete article finished on the outside in enamel, while the inside is lined with silk, paper, or painted in enamel.

The lid is designed to fit over the box portion, and to lift off, giving easy access to the interior. This method has the advantage of allowing a greater number of stockings to be kept inside if required, as the lid is deep and therefore "expanding." The weight of it will also keep the contents nicely flat.

There are, then, three distinct sections to be made up—the container, the drawer, and the lid. All wood, with the exception of the drawer sides, drawer back, and the floor for same, are $\frac{1}{4}$ in. in thickness. Take care in gluing to see the drawer



to the back edge of A, then the sides C are glued into place and so on.

Note that the front D of the box is shaped in the middle with the fretsaw to a long sweep or curve. When the box portion has been made, rub each side and end on a sheet of glasspaper so the joints are nicely hidden and made ready for the enamelling later.

Lid and Drawer

The lid pieces must be carefully sized up and cut, and when glued up it should slide smoothly over the box portion.

The drawer is constructed as Fig. 3 shows, the plywood floor L being cut to proper size with the back J and the ends K glued and pinned to it. The front I overlaps the ends so when the drawer is closed all the front surface of the box is flush.

As the lower surface of the floor lies flush with the bottom edge of the front I, it

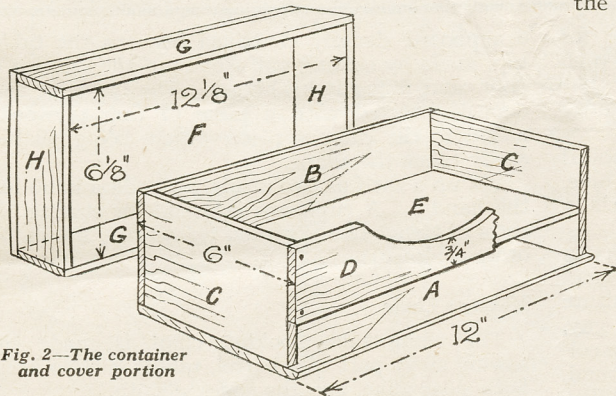


Fig. 2—The container and cover portion

fits the opening nicely, and the lid fits over the box part evenly and not too loosely.

Start with the box or container, and mark out all parts from the list. Each item is lettered in the list and on the diagrams Fig. 2 shows the principal parts and measurements, so the assembly is made extremely simple.

Assembling the various parts may be got from the letters on the diagrams. Part B is first attached

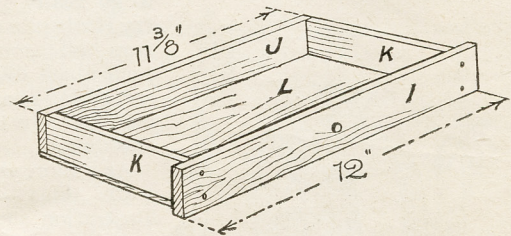


Fig. 3—How the drawer is constructed

would be advisable to glue in a piece of angle fillet inside along the front to stiffen up the floor.

Hobbies Enamel, sold in small tins at 2 $\frac{1}{2}$ d. and 3d. each is the best to use for articles of this kind as it is economical and easy to brush on and it leaves a beautifully smooth finish. The enamel can be bought either matt or glossy finish.

The slightly rounded effect to the lid and bottom box is got by glasspapering with coarse paper finishing the surfaces with a finer grade paper.

One of Hobbies transfers (No. 5182 at 2d.) makes a very fitting decoration for a corner of the lid, and would nicely break the monotony of an otherwise plain coloured box.

CUTTING LIST

- A—Floor 12ins. by 6ins. by $\frac{1}{4}$ in.
- B—Back 12ins. by 4ins. by $\frac{1}{4}$ in.
- C—Sides (2) 5 $\frac{1}{2}$ ins. by 4ins. by $\frac{1}{4}$ in.
- D—Front 12ins. by 2ins. by $\frac{1}{4}$ in.
- E—Floor (upper) 11 $\frac{1}{2}$ ins. by 5ins. by $\frac{1}{4}$ in.
- F—Top 12ins. by 6ins. by $\frac{1}{4}$ in.
- G—Side (upper) 12ins. by 2ins. by $\frac{1}{4}$ in.
- H—End (2) 6ins. by 2ins. by $\frac{1}{4}$ in.
- I—Front (drawer) 12ins. by 1ins. by $\frac{1}{4}$ in.
- J—Back 11ins. by 1-5/16ins. by 3/16in. plywood.
- K—Sides (2) 5ins. by 1-5/16ins. by 3/16in. plywood.
- L—Floor 11ins. by 5ins. by 3/16in. plywood.
- A small Erinoid knob Hobbies No. 26 for front of drawer.

CRAMPS

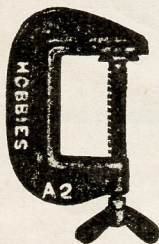
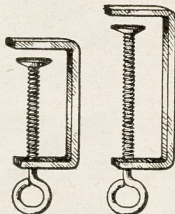
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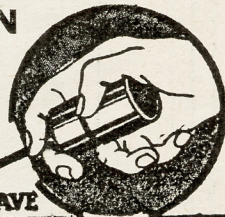
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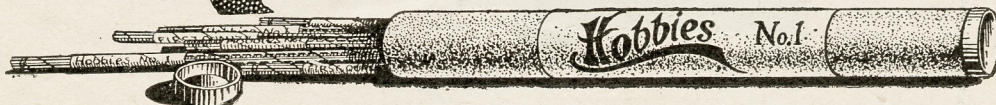
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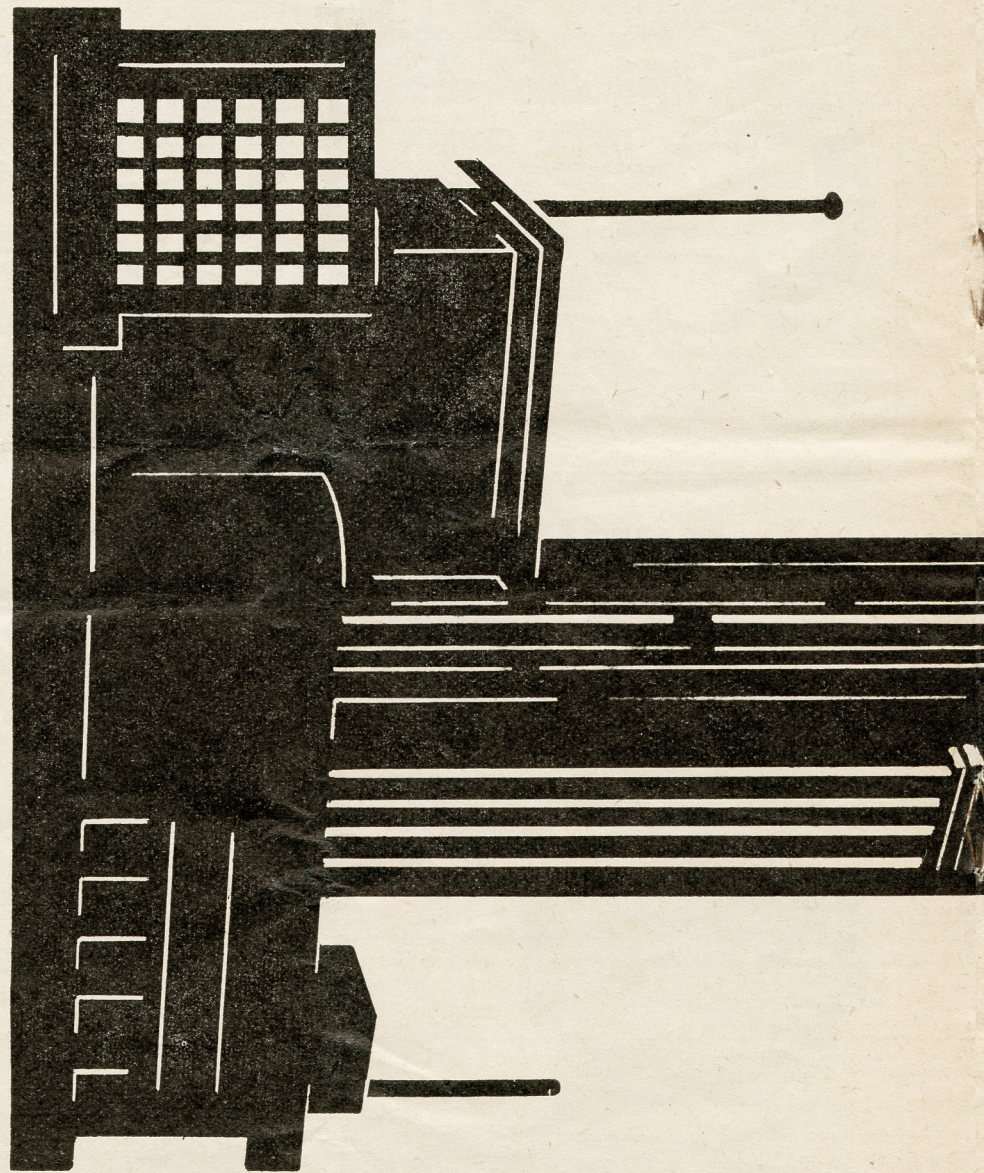
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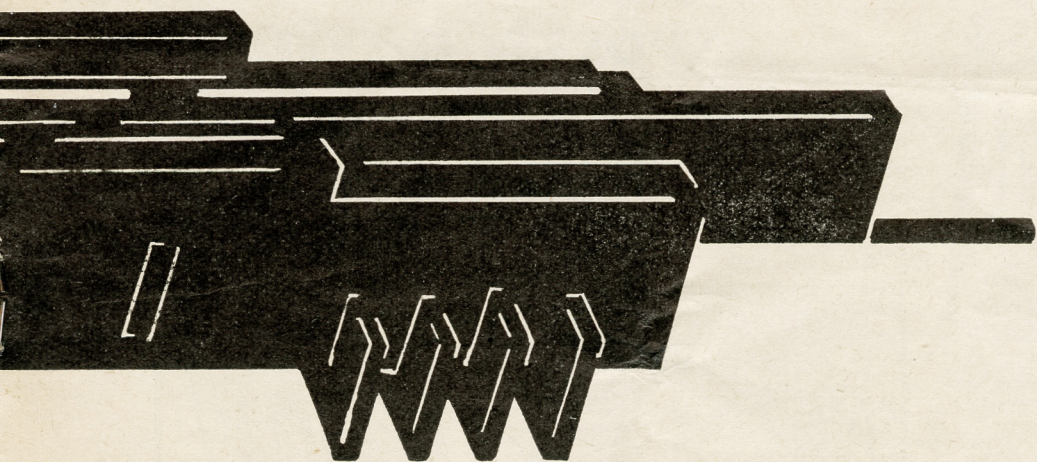
GLASGOW EMPIRE EXHIBITION SOUVENIR PLAQUE DESIGN

Full size pattern No. 2235

Cutting Instructions page 483

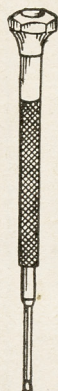


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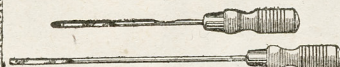
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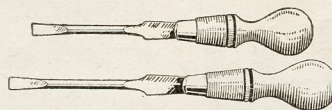


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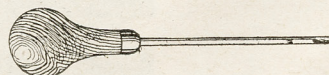
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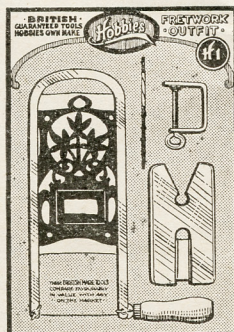
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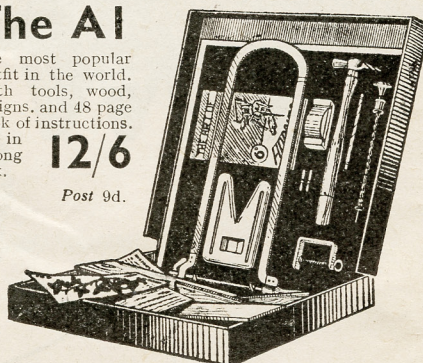


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Make yourself more at home with these COMFORTS IN CAMP

LIKE the camping comforts described in previous issues the following can all be made up from odds and ends of material, and will be found to add greatly to the ease of having a holiday in the open air.

Pure water for drinking purposes is always something of a worry even if the supply comes from what appears to be a perfectly reliable spring. It is always safer to filter any water taken from a natural supply, however clean it may appear to be. The easily made filter shown, will ensure that all foreign matter is removed.

A Simple Water Filter

Obtain two small flower-pots—a diameter of 4ins. or so across the top will be quite large enough—and wash them well out in hot water. Now place a piece of clean crock—broken flower-pot—over the hole at the bottom and on top of this spread a thin layer of fine shingle, also well washed in boiling water.

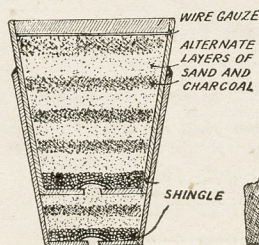
Next spread a layer of washed sand, then a layer of fine granulated charcoal, another layer of sand and another of charcoal, continuing until the pot is filled to within $\frac{1}{2}$ in. or so of the top.

Finally, cut a piece of wire gauze or fine perforated zinc and fit this tightly over the filling to keep it in place. Partly fill the second pot in a similar manner, but only to a height which will allow the first pot to fit tightly down on to the filling. Then run a little liquid cement around between the two pots to keep them secured together.

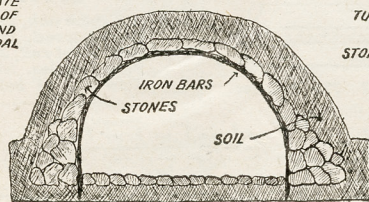
The sectional drawing will make the construction perfectly clear and if water is poured into the top of the filter it will quickly percolate down through the layers and run out of the bottom hole, leaving behind it all matter which may be present in the water.

Quick Boiling

Here is a way to get the kettle boiling quickly on a wet morning, or at any time when you are in a hurry and the Primus refuses to work. Cut slits down the sides of an empty bully-beef tin, as shown—your jack-knife or tin-opener will do the job—



Section of Filter



How to make a Camp Oven

and bend the alternate strips of tin downward at right angles.

Place a few pieces of stale bread in the tin and pour in sufficient petrol or paraffin just to saturate them. Then apply a match after the spirit has soaked well in.

If only just sufficient spirit is used, it will burn with a clear flame and boil the kettle in a few minutes when placed on top of the tin. Too much spirit will result in a smoky flame and less heat.

A Small Camp Oven

You can roast meat to a turn, bake pies or even bread in a small camp oven, if properly made. Dig a shallow trench in the ground and line the bottom and sides with stones, building these up so they cannot collapse.

Over the trench place a number of curved iron rods. Then continue laying the stones over these, as in the drawing. Finally, cover the whole construction over with turf, and block up one end with stones and turf.

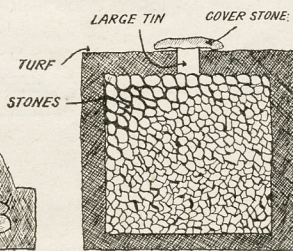
Light a good fire inside your oven, blocking up the open end, but leaving sufficient air-space for the fire to burn brightly. Keep the fire going until the stones inside appear to be red hot, when the meal should be ready prepared and placed inside. Block up the open end entirely so no heat may escape.

Your joint or whatever it is you wish roasted, will be perfectly cooked in a short time, according to its size, of course, but it is advisable to give it an occasional glance until you gain some experience in this type of camp cookery.

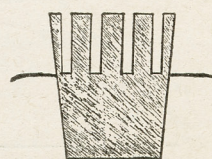
A Soak-Away

Soap-suds and other liquid refuse should always be thrown some distance from the camp, but even then they are apt to become offensive in hot weather. Construct a camp cesspool in the following manner and there will be no more trouble in that direction.

Dig a fairly deep hole in the ground and fill it with stones, large and small, to within a few inches of the top. Cover in the top with soil and



Cut-away view of Cesspool



A simple Stove for quick boiling

finally the turf you removed in the first place, beating it well down until quite solid.

Before filling up, however, cut the bottom from a beef tin and place this in the centre so the top edges project a trifle above the turf sealing.

Pour all slops into the tin, when they will quickly soak away and leave nothing behind them in the way of smell or residue. It is always best to keep the tin covered with a flat stone when not in actual use.

Insects in a tent are a nuisance at all times and

a real terror at night, especially if they happen to be of the mosquito type.

Get your chemist to make up the following mixture and dab a little around the skirt of the tent occasionally. It will keep all insect life, including earwigs and beetles, well at bay.

To equal parts of oil of geranium, oil of lavender and oil of citronella, add four parts of common turpentine. Shake well and apply sparingly, especially at night. The smell is very pleasant and, besides keeping away the insects, tends to prevent colds and catarrh.

This is really a serviceable handyman's SHOE RACK

THIS useful article can be made in deal if only for kitchen use, or oak or spanish chestnut if intended for the sitting room. It will hold four or more pairs, and by making the support rods adjustable, as shown, be suitable for any size of footwear.

Being quite portable it can be placed near the fire to warm up the house slippers and help to dry wet footgear. With the exception of the bottom, which is $\frac{1}{4}$ in. plywood, the timber suggested is $\frac{1}{2}$ in. thick.

Fig. 1 shows how to cut the side pieces, the dotted lines showing the position of the cross bars. The overall length, not shown, may be 1ft. 6ins. to accommodate two pairs of men's boots or shoes side by side, and the cutting list is calculated on this measurement.

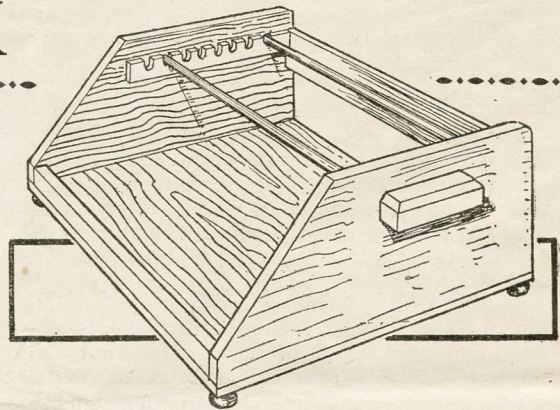
Suit Your Own Needs

It can easily be increased to hold more by just measuring across the soles of the boots and calculating accordingly.

The cross bars will be cut to the length required, the front one being 1in. and the back one 2ins. wide. These are nailed between the sides, the back one being fixed 1in. below the top edge.

The plywood bottom can be cut to size and glued and nailed in place. Four ball feet, $\frac{3}{4}$ in. diam. are added to raise the rack a little above the floor. Holes are bored for these and the feet glued in.

The adjustable rods, which support the boots and shoes, are lengths of $\frac{1}{2}$ in. dowel rod. These fit into a slotted strip of plywood glued each side.



To mark out, cut the strips to the dimensions given in Fig. 2, at $\frac{1}{4}$ in. below the top gauge a line across, and on this line mark centres at 1in. distances.

On these centres bore $\frac{1}{2}$ in. diam. holes and cut the tops of the holes away to form the slots for the rods to fit in. Fix these, one each side, with glue and nails just level with the back cross bar.

End Handles

A pair of handles can be bought, or easily made if a suitable piece of wood is handy. A piece of 1in. sq. section stuff will do, cut to length given in Fig. 3. Bevel off the top outer edges and ends and screw to the sides of the rack from the inside.

Do this before fixing the slotted strips for the rods. Now stain and varnish the rack to improve its appearance.

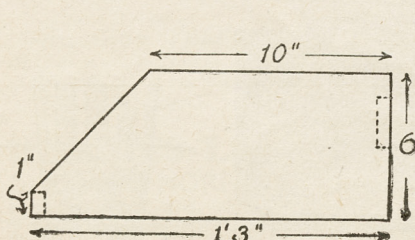


Fig. 1—Dimensions of sides.

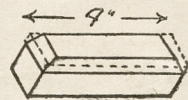


Fig. 3—The handles.

CUTTING LIST

$\frac{1}{2}$ in. thick oak, 2ft. 3ins. by 9ins.
 $\frac{1}{4}$ in. plywood, 1ft. 6ins. by 1ft. 6ins.
 $\frac{1}{2}$ in. dowel rod, 2 lengths of 1ft. 6ins.
 Pair handles, No. 238
 Four No. 15 ball feet.

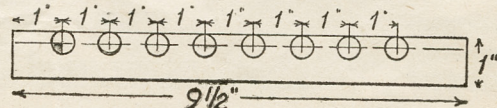


Fig. 2—Marking out slotted strips

Your home deserves this CHINA CABINET

AT first sight this cabinet may seem to be a difficult proposition to undertake, but it is very simple if due care is taken to make each section accurately to size.

It is designed to stand in small rooms, and its overall size is 4ft. 1½ins. by 1ft. 7ins. by 1ft. 0½ins. By adjusting the positions of the shelves it can, if desired, be used as a bookcase for encyclopædias or any special books.

The stool on which it stands is made separately to the case, and the various sections of the case can be made separately, thereby simplifying the job.

The Stool

The stool is made of four oak tapered legs 12ins. long (No. 523 in Hobbies Handbook), two oak strips 16ins. by 2ins. by ¾in. and two 9½ins. by 2ins. by ¾in. The strips, which must be planed exactly to size, are used as rails and are fitted into the legs with ½in. dowels as sold by Hobbies.

To mark out the dowel joints it is a good plan to cut a piece of cardboard the same size as an end of a rail (i.e., 2ins. by ¾in.) and cut two ½in. diameter holes in it where the dowel holes are to be bored. Then the pattern can be laid on each end of the rails and the circular holes marked with a pencil.

The holes in the legs can be marked with the same pattern if it is laid flush with the top and outside surface each time. All the holes can then be bored with a ½in. twist bit to a depth of one inch.

The Dowel Joints

The pieces of dowelling, cut into lengths to fit in the holes, must be slightly shorter than the depths of two combined holes or they may prevent the joints from fitting when the parts are glued together. The dowels can then be well glued and driven into the holes in the rails.

Next glue the projecting portions of the dowels which are in the long rails and fix them into the

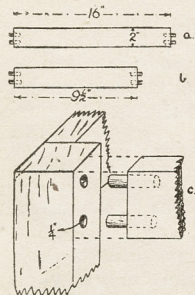


Fig. 2—Stool details. Front rail (a), side rail (b) and joint of leg and rail (c)

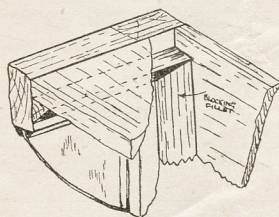


Fig. 4—Fixing top, bottom and back

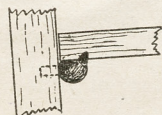


Fig. 5—Ball foot as shelf support



legs. Cramp these two framings so the joints fit and set aside until the glue has set. Then release the cramps and glue the short rails into the remaining holes in the legs to assemble the complete stool.

When cramping these joints, make sure that the stool is square in the angles because mistakes like this cannot be altered when the glue has set.

After the cramps are released, the outside top edges of the stool can be rounded by using a smoothing plane and finishing with glasspaper. Finally clean up the whole surface with plane, and glasspaper and set the stool on one side until the case is made.

The Door of the Cabinet

It will be noticed in Fig. 3 that the construction of the door is somewhat similar to that of the stool, so little explanation is necessary for this. The sides are made from oak stripwood each being 3ft. 0ins. by 1½ins. by ¾in.; the top rail is 1ft. 3ins. by 3ins. by ¾in.; the bottom rail 1ft. 3ins. by 1½ins. by ¾in., and the two bars each 1ft. 3ins. by 1in. by ¾in.

Mark out and bore the holes for the dowels as stated above, but notice that the ends of the bars only have one dowel in each. Then glue the prepared pieces of dowelling into the holes in the rails. Next mark out the shape of the top rail as in Fig. 3 and cut with a tenon saw.

The shapes can be smoothed and the corners rounded with a sharp chisel. When this is done

the door can be glued, cramped together and set aside to dry.

The sides of the cabinet may then be prepared similarly to the door. The only differences to note are that the top rails of the sides are not shaped and are only $1\frac{1}{2}$ ins. wide instead of 3 ins. as in the door and that the lengths of the rails and bars are $8\frac{1}{4}$ ins. instead of 1 ft. 3 ins. The side frames when glued together will then be $11\frac{1}{4}$ ins. wide.

When the door and side frames are dry, they can be smoothed up in readiness for polishing.

The panels in the door and sides must now be prepared to hold the glass. To do this obtain a quantity of $\frac{1}{4}$ round beading No. 34 and fit lengths round each panel, mitring the ends where they meet at the corners. The inset to Fig. 3 shows how this is done. When two squares of beading are fitted round a panel, the outside one can be nailed permanently and the other tacked temporarily into place until you are ready to fit the glass.

The Shelves

The two shelves are each 1 ft. $4\frac{1}{2}$ ins. by 1 ins. by $\frac{1}{2}$ in. in size and they fit in loosely so the tops are level with the tops of the bars. Fig. 5 shows a novel method of fixing them.

Obtain four ball feet No. 14 and glue them into holes bored in the side frames so that each corner of a shelf will rest on one of them when the cabinet is finished. If small holes are scooped out of the shelves where the balls fit it will prevent any likelihood of the shelves moving out of position.

The Top, Back and Bottom

The drawing at Fig. 4 shows the method of fixing the back, top and bottom to the sides. Triangular blocking fillets as illustrated in the Handbook, are glued and nailed round the inside of the side frames along the top, bottom and down the back.

The largest size must be used and must be set in so that the parts will fit together level. For instance, the back is made of $\frac{1}{4}$ in. oak plywood, therefore the upright fillets must be nailed $\frac{1}{4}$ in. from the back edges of the sides.

Similarly, as the top and bottom are $\frac{1}{2}$ in. thick, the fillets at the top and bottom must be set in $\frac{1}{2}$ in. from the top and bottom of the sides. The sizes of the top and bottom boards, which are oak, are each 1 ft. $4\frac{1}{2}$ ins. by 1 ins. by $\frac{1}{2}$ in., and the back is 3 ft. oins. by 1 ft. $4\frac{1}{2}$ ins. by $\frac{1}{4}$ in. When these are made true to size, the cabinet is ready to assemble.

Glue the fillets at the top and bottom of the side frames and carefully nail the top and bottom into position, then glue the upright fillets and nail on the back. Do not delay in nailing the back because that will make the carcass true to shape before the glue sets.

Camera and Fretsaw—(Continued from opposite page)

For example, a doll's house could be made using photographs of an actual building for the outside walls. A variety of nursery toys might be constructed from large size photographic cut-outs of animal pets.

For the home a large statuette of a child would be very interesting and ornamental, and with a little

The next job is to hinge the door on the front of the assembled frame, but it is advisable to wait until the glue is dry. To do this obtain a pair of $2\frac{1}{2}$ in. brass hinges and recess them into the back side of the door so that the hinge plate is level with the surface of the wood when screwed in.

Make the recesses 6 ins. from top and bottom of the door. Then cut corresponding recesses in the edge of the frame and screw the door into position.

Next obtain one ornamental fret No. 826 and glue it on to the top rail as shown in Fig. 1. The handle for the door can either be bought from Hobbies or if you prefer the modern wood ones you can make it yourself out of an odd piece of

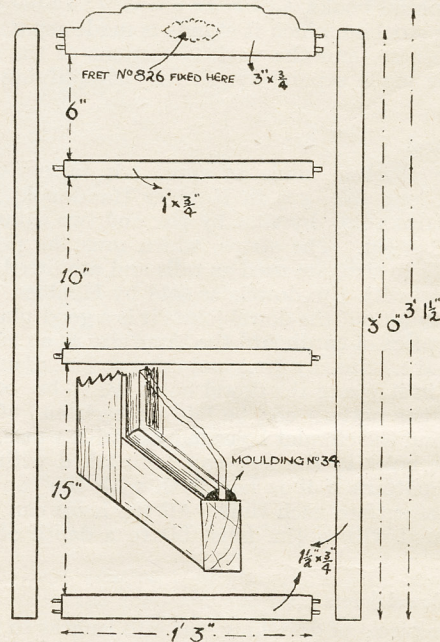


Fig. 2—Construction of door with details of glass fixing

oak. Fix it on with nails used like dowels, and glue.

The next job is to stain the whole piece of work to the required colour and then polish it. For a good finish use Hobbies Lightning Polish. The glass may now be put in place and the beading nailed securely.

The cabinet may then be stood on the stool, but if you think the cabinet is none too safe stood up so, you can screw four small metal brackets under it, fixing them also to the sides of the stool.

ingenuity could be incorporated in some useful object such as a fire screen

Similarly a shopkeeper could produce a most arresting window display with some large cut-out statuettes of interesting local buildings and monuments.

Here are novel ways of using CAMERA AND FRETSAW

AT this time of the year we usually draw the attention of our readers to the many interesting ways in which it is possible to combine the two hobbies photography and fretwork.

As most readers will already be well acquainted with the general principles of fretwork and photography which are involved, we propose to pass these over with the briefest mention and devote most of our space to suggesting new ideas which workers can adapt to meet their own particular requirements.

All types of photographs may be utilised. Views can be incorporated in ornamental panels on box lids, toilet trays, etc. Figure studies are particularly suitable for converting into little statuettes, bookends, ring holders and a host of other useful novelties.

Subjects to Take

Photographs of buildings and monuments, too, can be similarly treated and make excellent souvenirs of a holiday.

Generally speaking, contact prints will be found too small for the work, and those who do their own enlarging or do not mind the extra expense, will find it helpful to use whole plate size photographs on some occasions.

Postcard size enlargements are big enough for most purposes, and it is possible to get these done for 2d. each in most towns.

Photographs are admirably suited for converting into toys, the personal element particularly appealing to children. Holiday pictures can be made into jigsaw puzzles.

Games Figures

Statuettes suitable for hoop-la, skittles, etc., are easily made by sticking figure studies flat on to sheets of fretwood, cutting them out in outline and mounting the cut-outs on a base of fretwood or moulding.

A really first-class toy may be made in the form of a set of statuettes suitable for grouping to form

little scenes.

The realistic effects which can be obtained may be judged by the photograph of a seaside layout.

This was entirely composed of little statuettes made from holiday snapshots. A little sand

was sprinkled on the table top to represent the beach, whilst a wide strip of blue paper was laid across it for the sea. Similar sets could be made for a country setting, including windmills, farm buildings and animals, etc.

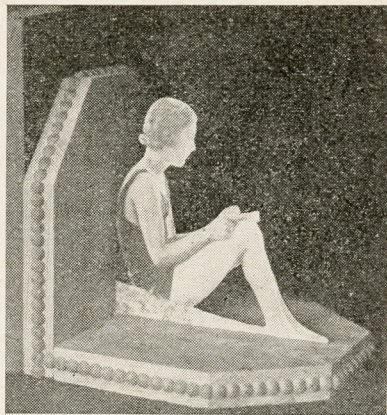
A novelty which will amuse old and young alike may be constructed as follows. Glue a number of figure studies flat on a sheet of fretwood and cut out in outline. Then cut each into three separate parts, viz., head, body and legs.

Care must be taken to see that the waists and necks are kept to the same widths in each case, so the parts are interchangeable.

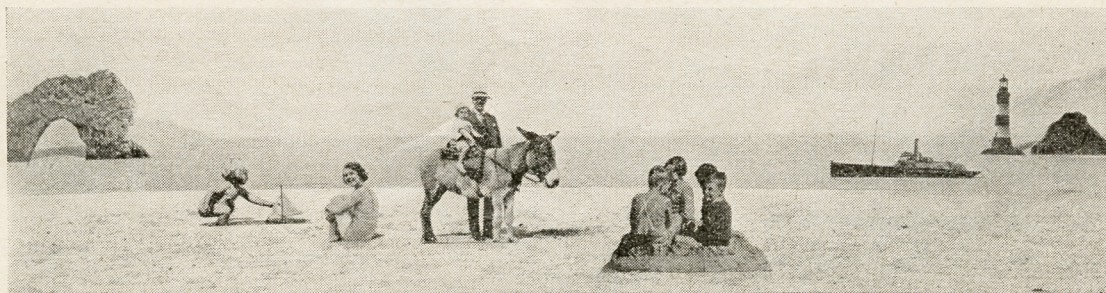
If the figures are all about the same size, the desired effect will easily be achieved with a little trimming where necessary. The number of arrangements which it is possible to make with a set of eight or nine such figures is almost unlimited, and the results are most amusing.

Those who do their own enlarging can produce prints as big as 20ins. by 16ins. for as little as 7d. each, and this opens up even further possibilities.

(Continued on facing page)



An attractive personal book-end



Statuettes cut from holiday snaps make a realistic scene when assembled as here

It's a simple carpentry job to make this BOOK TROUGH

HERE is a book trough of neat design which is soundly constructed, yet not too difficult a task for the woodworker of average ability. Care should be taken in shaping the ends, however, to secure a smooth curve. Any cabinet hardwood can be used.

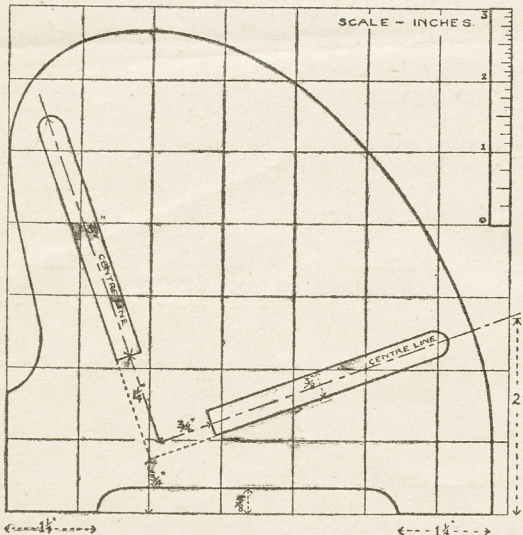
Begin by setting out the shape of the ends from the scale drawing, which is ruled in 1 in. squares to facilitate the work. Either mark it direct on to your wood or use carbon paper from a paper design.

If a number of the troughs are to be made, it is worth while making a template of the shape from plywood, with the grooves cut right through.

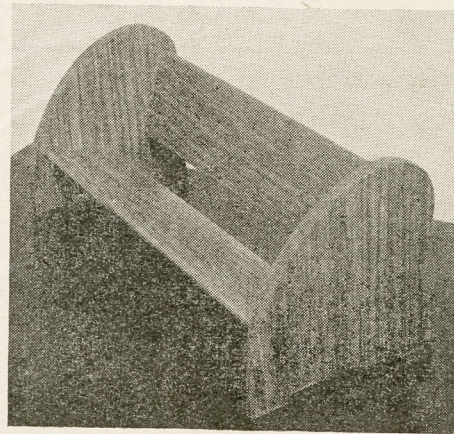
Marking out

All marking out can be thus done in a few seconds. Remember, of course, there is a right and left hand end to the model, so the grooves are not cut on the wrong side. Otherwise it will be found that the drawing gives sufficient data from which to draw the shape and set out the grooves.

The ends, which are of $\frac{1}{2}$ in. material, can be shaped with a fretsaw. The grooves, which are rounded at the top ends, are $\frac{3}{8}$ in. wide and $\frac{1}{2}$ in. deep, and are chopped with chisel and mallet, followed by a router if available.



How the ends are marked out in 1 in. squares



A wide chisel should be held upright with flat side to the line and given a blow with a mallet, working all round the groove so as to sever the fibres. A paring gouge will be required for the curved end and a smaller chisel for the other.

Making the Grooves

When this has been done, the groove which is nearly upright is chopped with a $\frac{3}{8}$ in. chisel, as if it were a mortise, and the other groove is chopped with a wide chisel used parallel with the sides.

The reason for this is that if a chisel is used parallel with the grain and driven with a mallet it is impossible to get a clean finish, and there is a danger of splitting the wood.

The grooves are finished to depth either with a router, or with a $\frac{1}{4}$ in. chisel used bevel downwards.

The shelves, which are of $\frac{3}{8}$ in. material, are planed to $3\frac{1}{2}$ ins. wide and $15\frac{1}{2}$ ins. long, the top edge of each piece rounded with the plane and glasspapered. They should then fit in the prepared grooves hammer-tight without further attention.

Suitable Finishes

If the trough is to be french polished, this should be done after cleaning up with glasspaper, but before the parts are glued together.

A wax-polished finish is to be recommended as more satisfactory and considerably easier, and Hobbies Waxine is excellent for the purpose.

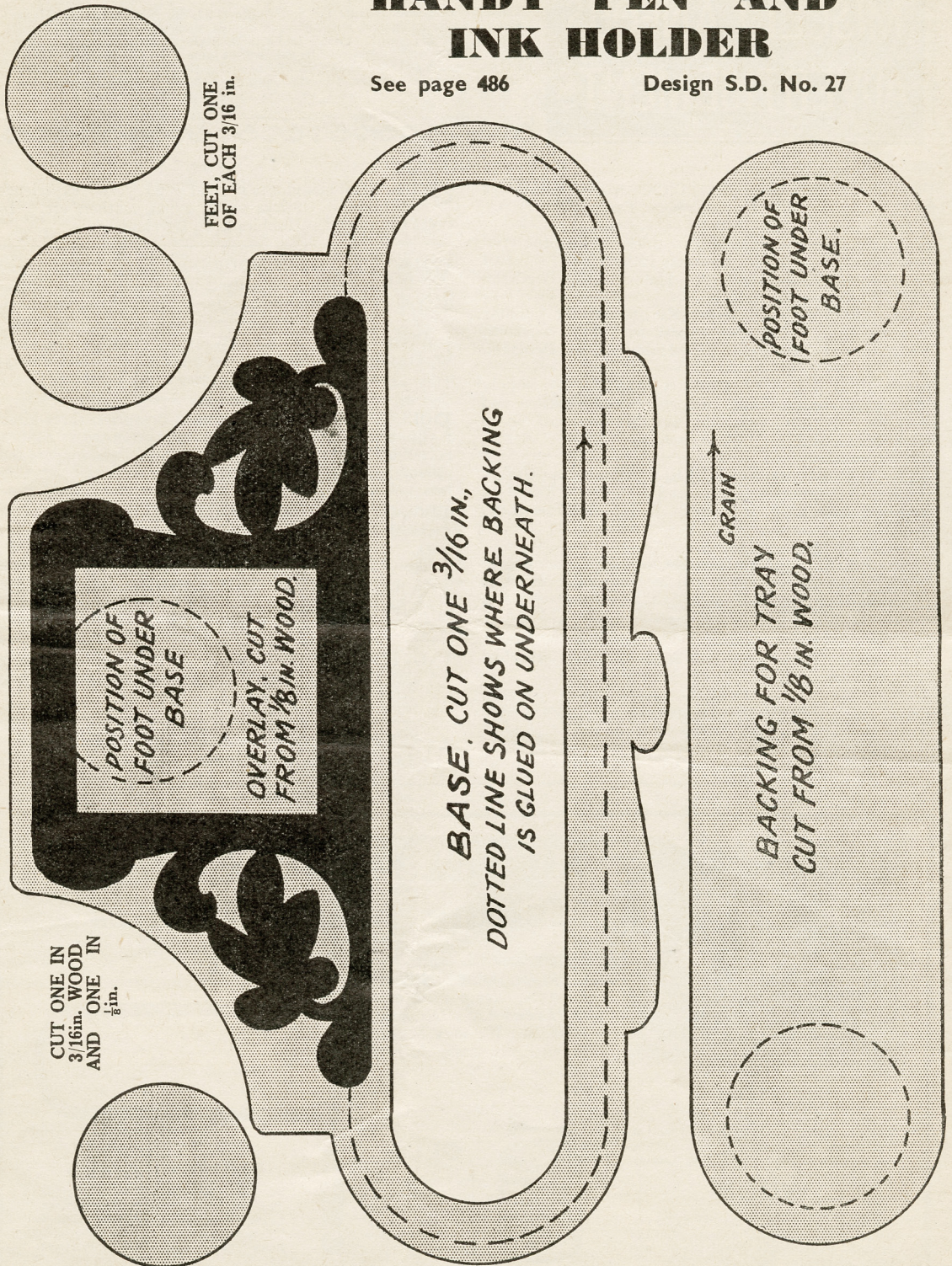
If the wood is a nice piece and well figured, it is best to avoid the use of stains, most of which will only tend to hide the grain. Wax can be used with good effect on most woods, and some should be applied before gluing up, except on the grooves and the ends of the shelves, so that any glue which is squeezed out of the joints will flake off easily when cold.

Gift Design for a Mirror Bracket next week

HANDY PEN AND INK HOLDER

See page 486

Design S.D. No. 27



MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 2d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Order and Stamps must accompany the order. They will be inserted in the earliest issue. To sell anything except fretwork goods or those shown in Hobbies Handbook. Orders can be sent either to Hobbies Weekly, Advertisement Dept. 30/32 Ludgate Hill, London, E.C.4, or Dereham, Norfolk.

LONELY? Then write Secy., U.C.C., 16BB. Cambridge St., London, S.W.1. Genuine. Established 1905.

IVORINE (white) about 1/32in. thick. Just the stuff for fretwork overlays. In sheets 12 by 6ins. 1/6; post 2d. Also Xylonite (black) 1/3.—Hobbies Ltd., Dereham.

LOW-WING MONOPLANE. Kit of parts for building a 3ft. 10in. wing span model with 14in. airscrew. It's a beauty! 19/6; post 6d.—Hobbies Ltd., Dereham.

BUILDING A MODEL POWER BOAT? We supply a steam engine unit, complete with propeller and shaft for only 12/6, post 6d. Suitable for boats up to 30ins. long.—Hobbies Ltd., Dereham.

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YOU DO BETTER WORK WITH A BENCH. We have them from 25/-. Write for particulars.—Hobbies Ltd., Dereham.

GLUE. Hobbies glue is as good as 25 years' experience can make it. Sticks wood, china, leather, etc. In tubes 6d. and 2d.—Hobbies Ltd., Dereham.

WHY NOT TREAT YOURSELF to a fretmachine? It will double your output in half the time. Prices from 35/- cash or easy payments.—Hobbies Ltd., Dereham.

LATHE AND FRETSAW £5 carriage forward. Treadle-driven and just the thing for the home handyman. Write for details.—Hobbies Ltd., Dereham.

POLISH OUTFIT 2/3; post 6d. Comprises three kinds of stain crystals, woodfiller, cotton-wool rubber, bottle of Hobbies "Lightning" polish, glasspaper and instructions.—Hobbies Ltd., Dereham.

FRAME YOUR OWN PICTURES! We supply mitre block, cramps, mouldings, etc. Easy, fascinating work. Profitable, too! Hobbies Ltd., Dereham.

IT'S EASY TO ENLARGE DESIGNS, pictures, etc. up to eight times original size with Hobbies all-steel Pantograph. 4/6; post 6d.—Hobbies Ltd., Dereham.

DO YOU KNOW WOOD? Eight specimen pieces each about 3ins. square, marked for reference, 8d. post free.—Hobbies Ltd., Dereham.

MAKING A CLOCK? We supply movements from 3/9. Hobbies Ltd., Dereham.



All You Need for Making Jigsaw Puzzles

Pictures, wood, saws, an Outfit for 3/9 or a Machine for 35/-. Drop a line now to Hobbies Ltd., Dereham, Norfolk. We may be able to give you some helpful advice.

PICTURES

A wide range of pictures from 1d. to 1/3. Not cheap, trashy pictures but some you will be glad to use for your best puzzles.

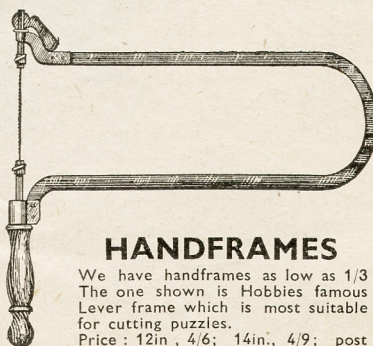
WOOD

We supply plywood panels, 16 by 16 ins. as low as 6d. for 2 (post extra). You can depend on Hobbies plywood—it will never disappoint you.



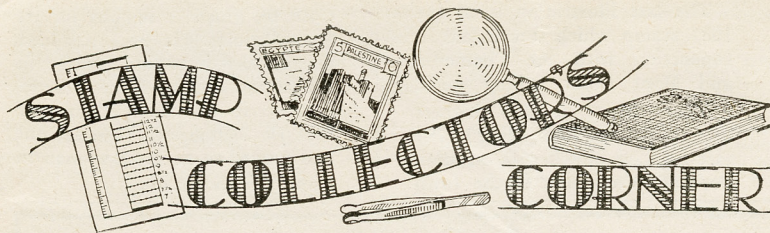
GLUE

For fixing pictures to wood. 6d. bottle, post 4d. Three times the quantity 1/- post 6d.



HANDFRAMES

We have handframes as low as 1/3. The one shown is Hobbies famous Lever frame which is most suitable for cutting puzzles. Price: 12in., 4/6; 14in., 4/9; post 6d. Fretsaws, 5d., 7½d. and 9d. dozen.



A STAMP TOUR OF FRANCE (Continued)

LET us continue our interesting stamp-album tour of France, the first portion of which appeared in our issue dated June 5th.

A few words on the Arc de Triomphe. The full name is the Arc de Triomphe de l'Etoile. It stands in the centre of the Place de l'Etoile from which radiate twelve avenues. The Arc is 150 feet high, was begun by Napoleon I in 1806 and completed in 1836 at a cost of £362,000.

The facades are decorated with sculptures commemorating the glories of the revolution and the Empire. From the top a magnificent panorama of Paris and the neighbourhood, including the Bois de Boulogne may be obtained. It is here that France has placed the tomb of their Unknown Warrior, and there is a perpetual flame burning.

In making the journey from the War area to Paris we could have passed through Rheims, and this is found on one of the set just mentioned, the 3 fr.

Rheims is in the centre of the champagne country, and its extensive underground storage cellars served as shelters for the inhabitants during the war. Although the cathedral suffered much, it has been repaired by now and is as

east is the celebrated Mont St. Michel, and a view of the high water island is given on the 5fr. of the 1929 set.

It is here that there is such treacherous sand, and because of this there is a causeway built so that at low tide vehicles can reach the castle shown. It is a favourite excursion for visitors to the town of St. Malo, when you return, allow sufficient time before the tide starts to come—for the tide is said to go faster than a galloping horse.

At Cancale, by the way, you can get famous oysters. The tram joining St. Malo to Cancale has a bell harnessed to the wheel so that as the tram goes along there is the continual clanging of this bell!

Now turn southwards towards Bordeaux. Like Le Havre, this is mentioned but not illustrated, for in 1923 they had the Philatelic Congress at Bordeaux and they also had a stamp overprinted to commemorate this.

East of Bordeaux there is a very interesting district called the 'Puy' district, and here the volcanic remains have given a picture which was illustrated some time ago in these columns, but as it is so quaint it is mentioned here.

mill, and underneath is the inscription 'Le Moulin d'Alphonse Daudet.'

Daudet was a French novelist—something after the style of Dickens. He was born at Nîmes on May 13th, 1840, the son of a silk manufacturer, and became a schoolmaster. Then he was a journalist, and one of his first works was published in 1866 and was called 'Lettres de mon Moulin.' Now you see why this small mill scene is used as a commemorative stamp for this novelist.

Close to Fontvieille is Arles, a larger town on the river Rhone, and this is illustrated on the 1935 3fr. stamp. Arles although it is on the river is mainly a historical town, the Roman Amphitheatre is especially fine.

Another very fine example of Roman architecture is shown on the 20fr. of the 1929 set. It is the Pont du Gard, situated at Nîmes which is to the west of Arles.

It is one of the sights which should not be missed by anyone taking a trip to the south of France. Although a picture of this stamp is not available readers may have seen a picture of the aqueduct. It shows, as it were, two bridges, one on top of the other. If you have seen such a picture then you will recall it from the description. If not, then try to find one, and if you visit the district take the time and the trouble to go and see the remains.

Marseilles is often described as the port on the river Rhone. Well, it is not on the Rhone, for if you look on the map you will see that it is some distance to the east. The reason is, of course, that the Rhone has a big delta, and a port would soon get silted up.

Marseilles is shown on one of the accompanying illustrations; the building on the left is the Notre Dame de la Garde at Marseilles.

Marseilles will serve as the jumping off place from where we go out of France yet into France. Because Algeria, which is in Africa, is really part of France, for she sends three senators and ten deputies to Paris.



View of Marseilles

Bay of Algiers

Chamonix and Mont Blanc

nearly as possible as it was, before destruction.

If we pass on towards the west we shall have on the 2 fr. of the 1929 stamp a view of something of what we shall see. This is called a Breton river scene, and although it is a picture from the artist's imagination, those who have visited the valley of the river Rance will conjecture to themselves the view from the top of the small town called Dinan.

Almost at the mouth of the river Rance but a few miles to the

Southwards from this district and we shall come to the Mediterranean. Making this journey will take us past a place which you will have great difficulty in finding on an ordinary map. You will have to use something after the style of the Times Atlas of the World.

It is the village of Fontvieille, and the reason that such a small place is shown on the stamps of a country is, of course, that something or somebody important comes from here. The scene is a

Algeria was first settled by France in 1830, and in 1930 France had a 50c. stamp showing a picture of the Bay of Algiers to commemorate the centenary of this settlement. The stamp is quite common, but is shown here so you may recognise what you have in your own collection.

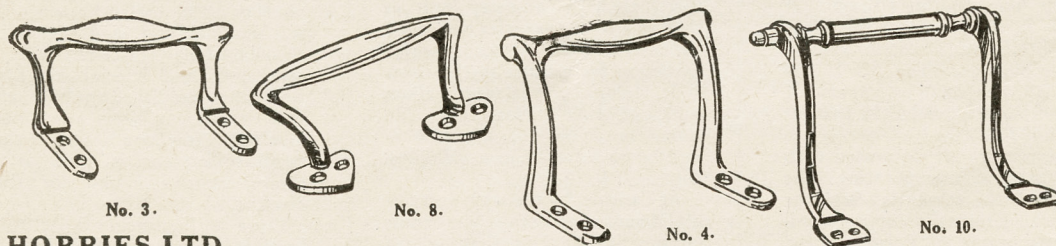
The last illustration is of the 1937 stamp which was issued in connection with the Chamonix and Mont Blanc ski-ing week.

Mont Blanc is the highest mountain in the Alps, being 15,781 feet high, on the French-Italian borders. Chamonix is the town

close to, which is famous for its winter sports. It has an added reason why it should appear in connection with Mont Blanc, because it was from Chamonix that De Saussure in 1786 set out and proved to be the first man to climb this mountain.

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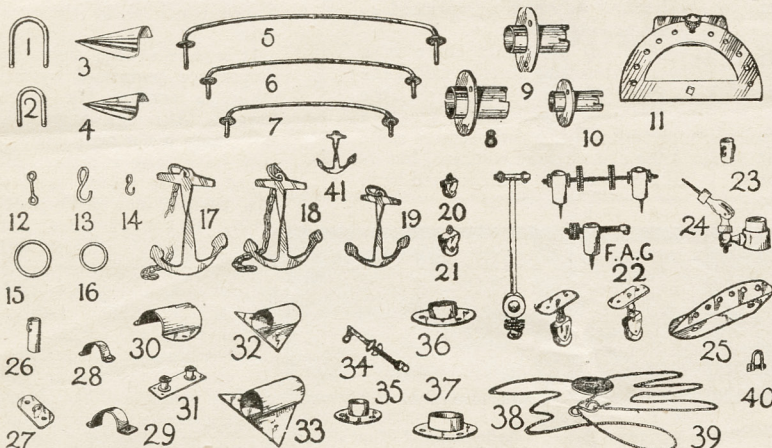
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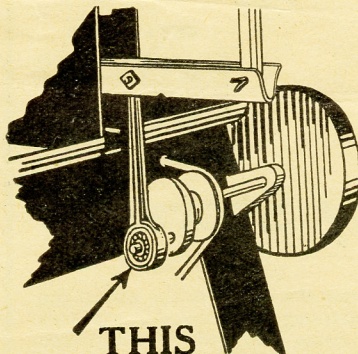
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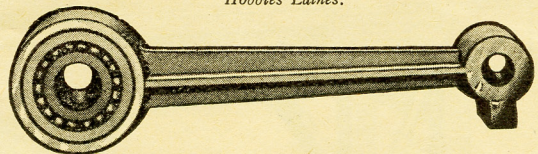
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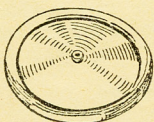
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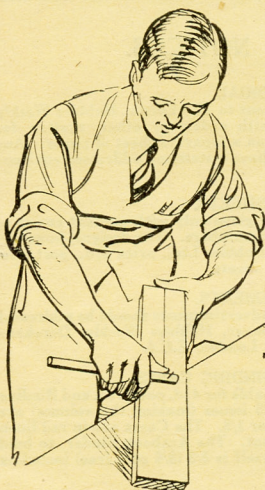
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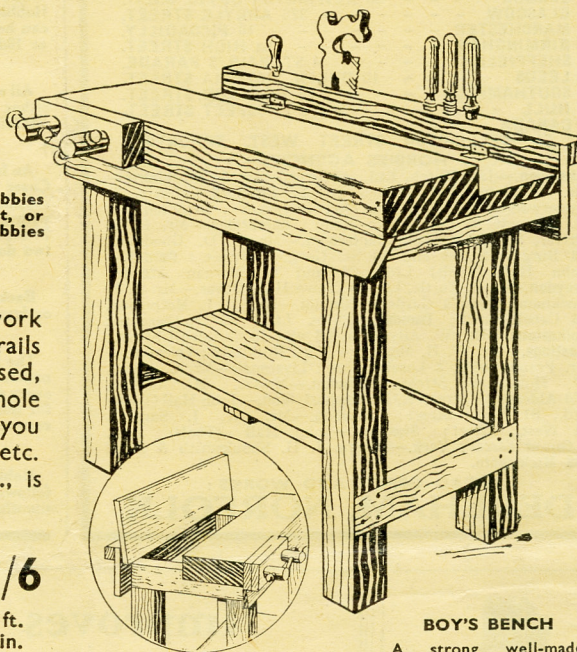
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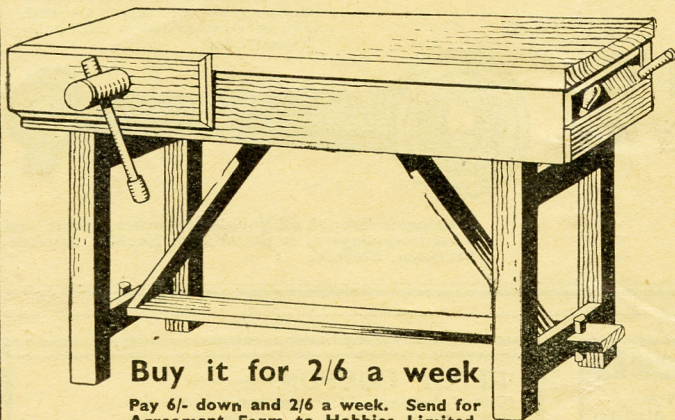


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